

E. V. R. GARDNER.
Hay-Elevators.

No. 152,838.

Patented July 7, 1874.

Fig. 3.

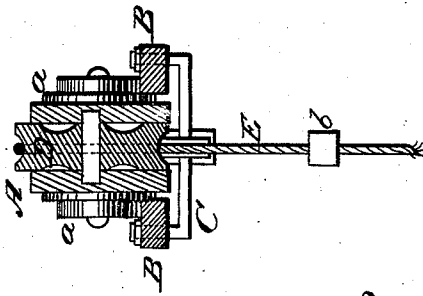


Fig. 2.

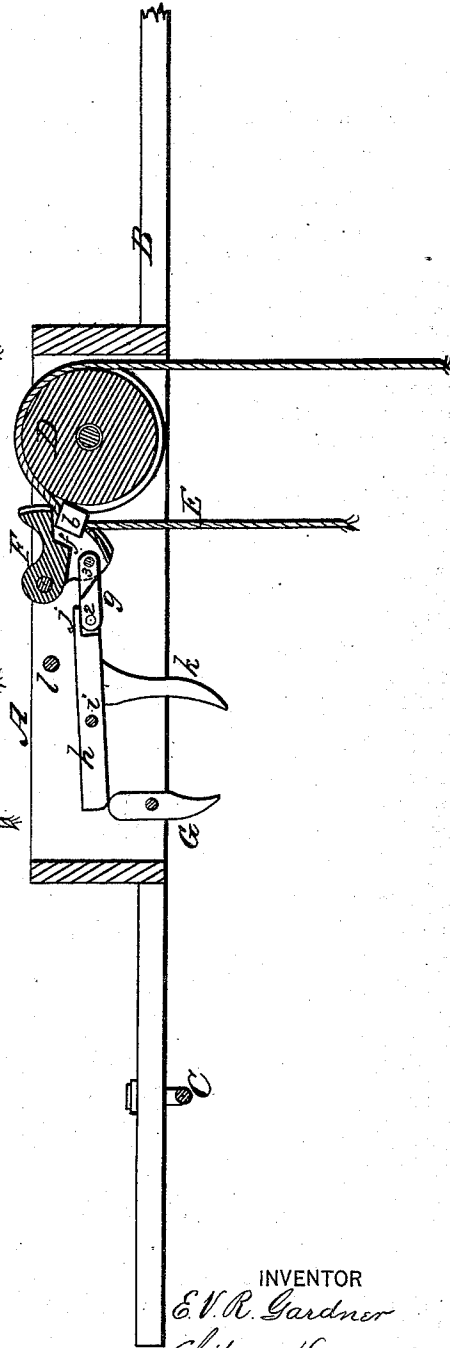
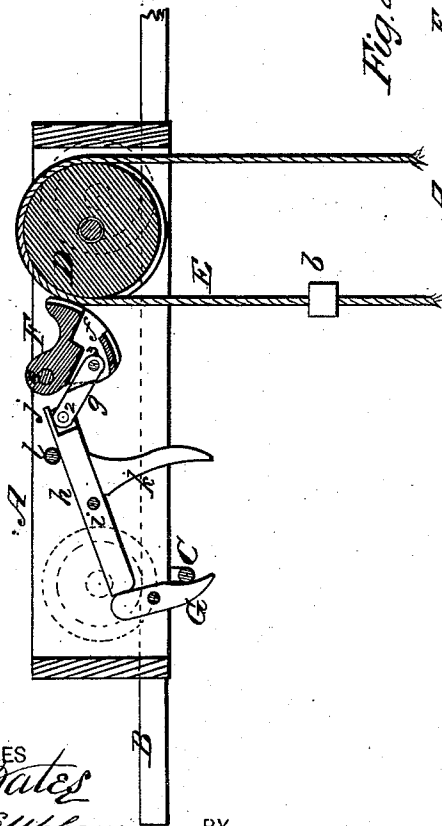


Fig. 1.



WITNESSES
E. H. Bates
George E. Upham

BY

INVENTOR
E. V. R. Gardner
Chipman & Fossum & Co.

ATTORNEYS

UNITED STATES PATENT OFFICE.

EMMET V. R. GARDNER, OF JOHNSON, NEW YORK.

IMPROVEMENT IN HAY-ELEVATORS.

Specification forming part of Letters Patent No. **152,838**, dated July 7, 1874; application filed June 6, 1874.

To all whom it may concern:

Be it known that I, EMMET V. R. GARDNER, of Johnson, in the county of Orange and State of New York, have invented a new and valuable Improvement in Hay-Conveyers; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings making a part of this specification, and to the letters and figures of reference marked thereon.

Figures 1 and 2 of the drawings are representations of longitudinal sections of my hay-conveyer, and Fig. 3 is a transverse sectional view.

This invention has relation to hay-conveyers which are used in connection with elevating devices; and it consists in a gripping pivoted segment, which has a recess in it to receive a suspension-block and an elevating-rope, in combination with a tripping and locking device for said segment, and with a pulley for the elevating-rope, whereby the load, when elevated to the proper height, will be securely held by the suspension-block and segment, as will be hereinafter fully explained. It also consists in combining with the recessed segment and its tripping-joints a tripping-arm and a pivoted catch, whereby the carriage will be arrested and held stationary to a station-bolt while elevating a load, and when a load is elevated and sustained by said segment the carriage will be released and allowed to travel on its rails to the point for discharging the load, and when the carriage is moved back to the place for loading the said tripping-arm will be struck by the station-bolt and the segment thrown down to release the elevating-rope, all as will be hereinafter explained.

In the annexed drawings, A designates a carriage of an oblong rectangular form, which is provided with four flanged wheels, *a*, that roll upon two rails, B B. The axles of the wheels are located near the upper portion of the carriage, so that the latter is depressed between the rails, and for this reason will not be liable to run off the rails. In practice the bottom of the carriage will be on or below the level of the bottom of the rails. C designates a station bolt or bar, which is constructed with

rectangular upturned ends that are passed up through the rails and secured by means of nuts or washers and rivets, as shown in Fig. 3. This forms a very strong attachment for the bolt or bar C, and allows its horizontal portion to extend transversely across the bottoms of the two rails at any desired distance below these rails. D designates a grooved pulley, over which the elevating-rope E passes, which pulley is applied at one end of the carriage, as shown in Figs. 1 and 2, and is grooved annularly. The elevating-rope E, which carries the fork, has a suspension-block, *b*, of cylindrical form, secured to it near the elevating-fork, the object of which block will be hereinafter explained. F designates a segment, which is pivoted at *e*, so that it will vibrate vertically between the cheeks of the carriage A, toward and from the periphery of the pulley D. This segment has a grooved periphery, and it is constructed with a recess, *f*, of such size as will receive the suspension-block *b* and press this block against the periphery of the pulley D, as shown in Fig. 2, thereby holding it rigidly and suspending the load of hay in the fork on the suspension-rope. The lower angle of the segment F is connected by a link, *g*, to a lever, *h*, which is pivoted at *i*, and constructed with a lip, *j*, and also with a tripping-arm, *k*.

When the segment is depressed, as shown in Fig. 1, to receive the suspension-block *b*, the joint 2 will be above the joint 3, and one end of lever *h* will bear upwardly against a fixed pin, *l*. When the parts are in the position last named the carriage A will be held by a pivoted catch, G, engaging with the cross-bar or station-bolt C, which catch bears by its upper end against the end of lever *h*. When the fork is loaded and raised to the desired height, the block *b* will enter the recess *f*, raise the segment F to the position indicated in Fig. 2, and thus cause the segment to bear the block against the pulley and depress the joint 2 below the joint 3, thereby locking the block and the segment securely. The rear end of the lever *h* will be thrown up at the same time that the segment is raised, which will allow the catch G to be released from the station-bolt C, and the carriage to be moved on its rails over the mow or stack. When the load

is dropped the carriage A is moved back until the arm *k* strikes the station-bolt C, which will depress the segment F and release the block *b*, thus allowing the fork to be drawn down for another load. At the same time the catch G will drop behind the station-bolt C and secure the carriage for another load.

It will be seen that the segment F is automatically actuated to arrest the elevating-rope, and to release this rope; also, that the carriage A is automatically arrested and released; also, that when the block *b* is received into the recess *f* in the segment F, the elevating-rope will not slip back, but will be rigidly held.

What I claim as new, and desire to secure by Letters Patent, is—

1. The segment F, recessed to receive the block *b* on the elevating-rope E, in combination with the pulley D and carriage A, substantially as described.

2. The lever *h*, with its arm *k*, in combination with the link *g*, segment F, pulley D, and catch G, substantially as described.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

EMMET VAN RANSELAER GARDNER.

Witnesses:

M. J. DONOVAN,

JOHN E. S. GARDNER.